

What is claimed is:

1. A fluid pressure regulator assembly comprising:
 - (a) means for providing a pressurized fluid;
 - (b) first means coupled to said providing means for transporting a pressurized fluid;
 - (c) second means for transporting a pressurized fluid;
 - (d) a fluid regulator coupled to said first transporting means and to said second transporting means; and
 - (e) means coupled between said first means and said fluid regulator for converting pressurized fluid into mechanical power.

2. The fluid pressure regulator assembly of Claim 1, wherein said mechanical power is rotational motion.

3. The fluid pressure regulator assembly of Claim 2, wherein said converting means comprises a plurality of vanes in fluid communication with said first providing means.

4. The fluid pressure regulator assembly of Claim 1, wherein said converting means is a vane motor.

5. The fluid pressure regulator assembly of Claim 1, further comprising an electrical generator coupled to said converting means.

6. The fluid pressure regulator assembly of Claim 1, wherein said converting means is a motor comprising:

- (a) an outer race centered about a first axis;
- (b) an inner race centered about a second axis;
- (c) wherein said first axis is different from said second axis;

- (d) wherein said first axis is parallel to said second axis; and
- (e) a vane coupled for movement relative to said inner race.

7. The fluid pressure regulator assembly of Claim 6, further comprising a generator coupled to said motor.

8. The fluid pressure regulator assembly of Claim 7, further comprising supplemental means coupled to said first means for converting pressurized fluid into mechanical power.

9. The fluid pressure regulator assembly of Claim 8, further comprising means coupled to said fluid regulator for allowing breathing of a fluid passing through the regulator.

10. The fluid pressure regulator assembly of Claim 9, further comprising a watertight generator coupled to said converting means.

11. A fluid pressure regulator comprising:

- (a) means for providing a pressurized fluid;
- (b) a first pressurized fluid line coupled to said providing means;
- (c) means coupled to said first pressurized fluid line for converting pressurized fluid into mechanical energy;
- (d) a regulator coupled to said generating means; and
- (e) a second pressurized fluid line coupled to said regulator.

12. The fluid pressure regulator of Claim 11, wherein said converting means comprises a plurality of vanes in fluid communication with said first providing means.

13. The fluid pressure regulator of Claim 11, wherein said converting means is a turbine.

14. The fluid pressure regulator of Claim 11, further comprising an electrical generator coupled to said converting means.

15. The fluid pressure regulator of Claim 11, wherein said converting means is a motor comprising:

- (a) an outer race centered about a first axis;
- (b) an inner race centered about a second axis;
- (c) wherein said first axis is different from said second axis;
- (d) wherein said first axis is parallel to said second axis; and
- (e) a vane coupled for movement relative to said inner race.

16. The fluid pressure regulator of Claim 15, further comprising a generator coupled to said motor.

17. A method for converting pressurized fluid into power comprising:

- (a) providing a fluid regulator;
- (b) providing pressurized fluid to said fluid regulator; and
- (c) converting said pressurized fluid to mechanical motion prior to said pressurized fluid reaching said fluid regulator.

18. The method for converting pressurized fluid of Claim 20, further comprising converting said mechanical motion to electricity.

19. The method for converting pressurized fluid of Claim 21, further comprising monitoring said electricity and regulating said mechanical motion sufficiently to produce said electricity at a substantially predetermined rate.

20. The method of converting pressurized fluid of Claim 17, wherein said converting means is a vane motor.